

# [EARPHONE STRUCTURE WITH A COMPOSITE SOUND FIELD]

## Abstract

An earphone structure including one or more composite chambers is described. Each of the composite chambers includes sub-speakers. The sounds generated by these sub-speakers are uniformly distributed in the composite chamber and a composite sound field is generated by these sub-speakers. The sound field generated by each of these sub-speakers can be adjusted by re-locating the position of the sub-speaker, for example, by re-locating the sub-speaker, or by re-locating the sub-speaker in different angles, to generate the composite sound field. The sound field generated by the main speaker and the composite sound field generated by these sub-speakers can form a spatial sound with very good quality. By using of its physical characteristics of locations of these sub-speakers, the sound generated by the earphone has a uniformly diffusion sound pressure and a surround effect, which allows a user of the earphone to enjoy a sound field similar to that in a theater.